REMARKS

This Application has been carefully reviewed in light of the Office Action mailed February 17, 2004. In order to advance prosecution of this case, Applicants amend Claims 1, 6-7, 13-14, 15, 20 and 24-25. Applicants respectfully request reconsideration and favorable action in this case.

Information Disclosure Statement

Applicants submitted an Information Disclosure Statement on January 17, 2002. Applicants did not receive PTO-1449 forms, initialed by the Examiner, indicating that the Information Disclosure Statement submitted January 17, 2002 was reviewed by the Examiner even though the office action indicated that PTO-1449 forms were attached. Applicants respectfully request that the Examiner confirm the review of the Information Disclosure Statement submitted January 17, 2002, by returning the initialed PTO-1449 forms.

Section 102 Rejections

The Office Action rejects Claims 1, 6-13, 15, 20-25 under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 5,566,084 issued to Cmar ("*Cmar*"). Applicants respectfully traverse these rejections for the reasons stated below.

Independent Claim 1, as amended, recites:

> A method for remote energy consumption system identification of a facility, comprising:
> receiving aggregated energy consumption data associated with the facility;
> receiving external variable data for the facility corresponding to the aggregated energy consumption data;
> generating facility data associated with the facility;
> remotely generating disaggregated energy consumption data for the facility from the aggregated energy consumption data using the facility data and the external variable data; and
> remotely identifying an energy consumption component of the facility using the disaggregated energy consumption data.

Applicants submit that *Cmar* does not teach or suggest each and every claim limitation of amended Claim 1. First, *Cmar* does not teach or suggest, "generating facility data associated with the facility."

Cmar makes no mention of generating facility data. *Cmar*'s Figure 3A clearly shows by the directional arrow (reference numeral 1B) that the facility data is not generated by the process, but is an input to the process, just as are the utility bills and the weather (NOAA) data. *Cmar* acquires facility data using standard methods and does not generate facility data from the aggregated energy consumption data and external variable data. *Cmar* explicitly states that the information in Fig. 3A, Part 1B is collected by stating, "similarly, the facility end-use and energy conservation (ECM) measures collected at 1B' provide the necessary facility statistics at 2B"." (col. 17, lines 36-39). In addition, *Cmar* states in the abstract "minimal facility data (just area data)" is utilized. And at col. 9, line 16, *Cmar* states "unlike prior processes, as earlier discussed, the invention can operate with minimal facility data."

Thus, *Cmar* does not teach or suggest "generating facility data associated with the facility," as recited in amended Claim 1 because *Cmar* collects facility data associated with the facility and does not generate it. In contrast, our method generates facility data using the aggregated energy consumption data and external variable data. It is also not an obvious extension from "collecting" facility data and using it as input in a process because significant innovation is required that combines inverse modeling and forward modeling while *Cmar* never hints at such techniques. The ability to generate facility data remotely has distinct value in permitting more detailed remote analysis of a facility.

For at least this reason, *Cmar* does not anticipate amended Claim 1. Reconsideration and favorable action are respectfully requested.

Second, *Cmar* does not teach or suggest, "remotely generating disaggregated energy consumption data for the facility from the aggregated energy consumption data using the facility data and the external variable data; and remotely identifying an energy consumption component of the facility using the disaggregated energy consumption data"

Cmar is directed toward "[a] process for identifying patterns of electric energy consumption and demand in a facility . . . using monthly electric billing data over the years . . . [t]ogether with minimal facility data (just area data) and daily maximum and minimum outside temperature data . . . to disaggregate billing data into lighting, power, and HVAC end-use categories, and a statistical analysis, including regression, to separate the same billing data into usage and temperature-dependent components." (Abstract) (emphasis

added). This is consistent with *Cmar*'s Fig. 3b, reference numeral 5 that shows a process step titled "disaggregation of utility bills processor" and then shows disaggregation into lighting, process, and HVAC end uses. The HVAC use is sub-divided into non-weather dependent and temperature dependent uses.

Cmar's system is also not capable of achieving disaggregation remotely. *Cmar*'s claims and specification show *Cmar* has disaggregated into the four major end uses, he states that he collects specific site data through a site survey of connected loads. "As the process continues, supplemental data is added to the end-use descriptions through a site survey of connected loads. These connected loads are profiled according to demand and usage. At minimum, demand is characterized as being a member of one or more of constant operating load; intermittent operating load; variable operating load; and seasonal operating load. At minimum, usage is characterized as being a member of either specified or unspecified operating hours . . . . (*Cmar*, col. 7, lines 22-30) To acquire the data that *Cmar* refers to would require reading equipment name plate values and performing measurements.

In contrast, amended Claim 1 remotely disaggregates energy consumption data for the facility to remotely identify an energy consumption component of the facility. Examples of the disaggregation capabilities include determining the energy consumption of chillers, cooling tower fans, primary and secondary chilled water distribution loop pumps, boilers, hot water distribution pumps, air handler fans, lights, etc. This approach remotely identifies the presence of specific equipment and components in a facility by remotely disaggregating the energy consumption data down to the equipment or component level.

Thus, *Cmar* does not teach or suggest "remotely generating disaggregated energy consumption data for the facility from the aggregated energy consumption data using the facility data and the external variable data; and remotely identifying an energy consumption component of the facility using the disaggregated energy consumption data," as recited by amended Claim 1.

For at least these additional reasons, *Cmar* does not anticipate amended Claim 1. Reconsideration and favorable action are respectfully requested.

With respect to independent Claim 15, as amended, Applicants submit that independent Claim 15 is allowable for reasons analogous to those above in conjunction with amended Claim 1. Reconsideration and favorable action are respectfully requested.

Dependent Claims 6-13 depend from independent Claim 1 and dependent Claims 20-25 depend from independent Claim 15, and are also not anticipated by *Cmar* because they include the limitations of their respective base claim, which are shown above to be allowable, as well as additional limitations that further distinguish *Cmar*. Therefore, Applicants respectfully request that the rejection of Claims 6-13 and 20-25 be withdrawn.

Section 103 Rejections

The Office Action rejects Claims 2-5, 14 and 16-19 under 35 U.S.C. §103(a) as being unpatentable over *Cmar* in view of U.S. Patent No. 6,366,889 issued to Zaloom ("*Zaloom*"). Applicants respectfully traverse these rejections for the reasons stated below.

Dependent Claims 2-5 and 14 depend from independent Claim 1 and dependent Claims 16-19 depend from independent Claim 15, and are also not anticipated by *Cmar* because they include the limitations of their respective base claim, which are shown above to be allowable, as well as additional limitations that further distinguish *Cmar*. Therefore, Applicants respectfully request that the rejection of Claims 2-5, 14 and 16-19 be withdrawn.

In addition, please note the following comments on *Zaloom*. As stated at col. 18, lines 16-24, "[t]his section provides an on-going summary of the areas that require special attention. Identified are billing errors, operating errors, missing bills or pulses, as well as any changed made to the account. The purpose is to provide management with constant awareness of past and current problems for prompt consideration and resolution. By turning the information provided in the various parts of the system into knowledge this feature spares the user the time and expertise needed to analyze the information in-house." (Emphasis added). This statement on missing data is the only reference to missing data in *Zaloom*. In fact, *Zaloom* is merely pointing out that missing bills or pulses are identified; he makes no statement in his document about filling in missing data. Applicants' invention focuses on

filling in missing data for the purpose of using a complete data set for disaggregation to remotely identify specific energy consumption components in a facility. Although filling in missing data is not required, the ability to disaggregate the data to identify energy consuming components improves with a complete data set.

Zaloom also states at col. 18, lines 47-54 that "[t]he System operates to provide tables of the monthly and year-do-date consumption, cost, and price data of each account included in the system in comparison to the other accounts in the system--for the most recent three-year period--by type of utility and by cost center. Where percentages have decreased by 10% or more, the numbers will appear in blue; where percentages have in creased by 10% or more, the numbers will appear in red."

The above section makes no statement of filling in missing data or even handling missing data. This item simply checks the percent of change of a data item with respect to some unidentified item and colorizes the item if it increased or decreased by 10%. Figures 2a and 2b in *Zaloom* show a standard utility bill as would be sent from a utility. This standard utility bill breaks down standard utility charges which include various on and off peak charges (which are time based), energy use charges, various charges for riders and taxes. This does not constitute disaggregating energy consumption data corresponding to the facility since the only energy consumption data shown is the aggregated consumption data. Hence, *Zaloom* does not teach about disaggregating data to achieve an understanding of the systems internal to the facility. This is at least one reason why one skilled in the art at the invention was made would not combine *Zaloom* with *Cmar*.

CONCLUSIONS

Applicants have made an earnest attempt to place this case in condition for allowance. For the foregoing reasons, and for other apparent reasons, Applicants respectfully request full allowance of all pending Claims. If the Examiner feels that a telephone conference or an interview would advance prosecution of this Application in any manner, the undersigned attorney for Applicants stands ready to conduct such a conference at the convenience of the Examiner.

A Notification of Extension of Time for two (2) months from May 17, 2004 through July 17, 2004, for responding to the Office Action mailed February 17, 2004 is hereby enclosed along with a check in the amount of $210.00 to satisfy the extension fee under 37 C.F.R. §1.17(a)(2) for small entity.

Applicants believe no other fees are due. However, should there be a fee discrepancy, the Commissioner is hereby authorized to charge any required fees or credit any overpayments to Deposit Account No. 02-0384 of Baker Botts L.L.P.

Respectfully submitted,

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